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SEQUENCE LISTING

RECEIVED
JAN 24 2002
TECH CENTER 1600/2900

<110> Doberstein, S.
Elson, S.
Ferguson, K.
Homburger, S.

<120> ANIMAL MODELS AND METHODS FOR ANALYSIS OF LIPID METABOLISM AND SCREENING OF PHARMACEUTICAL AND PESTICIDAL AGENTS THAT MODULATE LIPID METABOLISM

<130> 7326-101, EX99-004

<140> 09/332,522

<141> 1999-06-14

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<170> PatentIn version 3.1

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Asn Ile Pro Leu Pro Gly Thr Ile Pro Thr Lys Ile Val Val Pro Tyr
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Glu Thr Gly Ser Gly Ser Leu Ser Trp His Ser Leu Asn Thr Ser Ser
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Thr Thr Pro Gln Glu Pro His Pro Ser Gly Glu Pro Trp Pro Pro Glu
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Pro Gln Val Leu Asn Ser Ser Thr Thr Asp Arg Ser Pro Pro Pro Leu
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Leu Pro Trp Ala Gln Ser Ser Pro Ala Phe Phe Tyr Val Gln Gln Ile
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Thr Leu Arg Thr Ser Val Leu Pro Trp Thr Glu Gly Met Gln Leu Met
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Asp Ala Phe Arg Ala Pro Leu His Glu Val Phe Lys Leu Leu Glu Ile
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Val Arg Asn His Gln Ser Ser Glu Asn Lys Arg Thr Leu Glu His Asn
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Cys Leu His Val Asp Asn Val Lys Arg Gly Thr His Gly Gln Leu Asp
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Gln Ile Phe Pro Glu Tyr Gly Cys Leu Leu Leu Ser Pro Ala Asn Leu
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Trp Thr Gln Asn Ser Gln Asn Phe Thr Arg Asp Thr Asn Ile Leu Asn
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Thr Ile Phe Gln Tyr His Asn Leu Gln Lys Ser Lys Val Ser Ala Ala
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Glu Met Leu Phe Gly Leu Pro Met Gln Asp Thr Gly Phe Lys Arg Tyr
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Pro Leu Arg Ala Arg Ser Arg Ile Ile Gln Tyr Ala Leu Thr Leu Phe

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Pro	Val	Ile	Gln	Glu	Phe	Cys	Ile	Phe	Ala	Ile	Val	Gly	Leu	Leu	Ser
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Asp	Phe	Met	Leu	Gln	Met	Leu	Leu	Phe	Ser	Thr	Ile	Leu	Ala	Met	Asn
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Ile	Lys	Arg	Thr	Glu	Tyr	Thr	Ala	Glu	Ala	Lys	His	Leu	Pro	Lys	Met
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Leu Leu Ser Cys Thr Gln Gly Ala Gly Arg Gln Asp Phe Arg Phe Phe
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Gly Ala Ala Pro Ala Leu Pro Pro Phe Val Pro Gly Thr Phe Gln Arg
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Ser Gln Ser His Pro Lys Leu Cys Phe Ala Asp Pro Ala Ser Val Ser
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Asp Arg Thr Ser Leu Val Asn Gly His Ser Ser Pro Glu Gln Arg Ile
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Pro Lys Arg Ile Lys Ile Val Asn Phe Trp Ala Arg Thr Arg Phe Phe
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Gln Arg Ala Phe Met Ile Trp Met Ile Val Trp Ile Cys Ser Ile Val
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Tyr Asn Ser Gly Tyr Leu Glu Gln Leu Phe Ser Met Gln Ser Asn Gly
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Thr Met Thr Ala Thr Leu Glu Leu Gln Arg Arg Leu Gln Ala Gly Arg
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Gly Ala Val Ser Ser Phe Phe Glu Gly Trp Gln Ala Asp Gly Gln Arg
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Ala Thr Ser Ala Pro Ser Gly Ser Gly Phe Ser Thr Pro Ile Lys Ala
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Pro Leu Ala Ile Asp Ile Asn Glu Thr Ala Glu Glu Met Met Arg Leu
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Arg Tyr Pro Ser Phe Asp Leu Asn Tyr Phe Leu Ser Asn Phe His Trp
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Ser Thr Ile Met Lys Gln Tyr Asn Ile Ser Leu Ser Gly His Tyr Val
 675 680 685

Thr Leu Leu Pro Thr Ile Arg Leu Ser His Ala Ile Ala Pro Glu Leu
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Ala Thr Leu Leu Arg Asn Pro Gln Glu Gln Leu Gln Gln Asn Phe Gln
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Trp Lys Ala Leu Ala Ala Ala Leu Asp Pro Leu Asp Phe Asn Asp Asp
725 730 735

Asp Val Arg Arg Glu Ser Pro Met Val Met Ala Glu Gly Leu Pro Leu
740 745 750

Val Pro Lys Ser Pro Met Glu Ile Phe Phe Ala Ile Leu Leu Cys Cys
755 760 765

Ile Ser Ile Phe Val Leu Cys Tyr Thr Met Val Val Phe Tyr Arg Cys
770 775 780

Ile Cys Thr Arg Asn Tyr Ala Glu Trp Arg Ser Ser Trp His Glu Ser
785 790 795 800

Glu Ala Pro Tyr Lys Gln Thr Glu Gln Ile Leu Glu Gly Val Pro Thr
805 810 815

Gln Ile Ala Gly His Lys His Arg Ile Glu Cys Leu Val Ser Asp Gly
820 825 830

Ala Tyr Ile Ile Ser Cys Cys Leu Lys Gly Gln Ile Arg Val Trp Asp
835 840 845

Ala Arg Ser Gly Glu Gln Leu Thr Ser Ile Ser Arg Ser Asp Ile Gln
850 855 860

Ile Ser Gln Gln Arg Thr Asp Gly Gln Thr Leu Val Arg Lys Leu Ala
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Val Ser Pro Val Trp Cys Leu Asp Tyr Phe Asp Asn Leu Ile Ala Val
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Gly Cys Ala Asn Gly Arg Val Glu Leu Trp Glu Ser Pro Ala Gly Leu
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Leu Lys Cys Ala Tyr Gln Glu Asp Ala Lys Arg Asn Gln Gly Ile Thr
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His Ile His Leu Asn Gly Asp Arg Val Ile Val Ala Arg Leu Asn Gly
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Arg Leu Asp Phe Tyr Arg Leu Glu Thr Tyr Tyr Lys Gly Lys Gln Ile
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Asp Trp Gly Phe Thr Ser Ala Tyr Arg Arg Thr His Val Arg Thr Gly
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Ser Thr Gly Ser Leu Gly Leu Met Leu Gln Gln Gln Arg Cys Gln Gln
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Glu Ala Ser Gln Lys Thr Thr Lys Glu Glu Met Lys Ile Thr Leu Glu
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Val Asn Asp Met Val Phe Thr Gly Ser Gln Asp His Thr Leu Lys
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Gly Ala Val Ser Cys Leu Ala Cys Ala Pro Ser Tyr Val Ile Ser
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Leu Gly Thr Asp Glu Arg Ile Cys Val Trp Glu Arg Phe Gln Gly
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Asn Leu Leu Thr Thr Ile Asn Ile Ser Asn Ala Tyr Ser Ser Leu
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Gly Gln Pro Ala Arg Glu Val Lys Leu Asp Phe Ala Asn Leu Gln
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Leu His Ser Asp Met Leu Asp Ile Ile Leu Asn Asp Met Asp Leu Ala
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Pro Thr Gln Met Tyr Asn Met Leu Leu Asp Glu Pro Arg Thr His Thr
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Gln Gln Thr Gln Ser Val Asp Gln Gln Pro Gln Ser Val Glu Gln Gln
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Pro His Val Lys Ser Glu His Ser Ser Pro Val His Ile Lys Glu Glu
85 90 95

Leu His Gln Gln Gln Gln Ser Pro Leu Leu Val Tyr Lys Pro Asp
100 105 110

Pro Leu Ile Ala Thr Ser Tyr Asn Cys Pro Gln Gln Gln Pro Thr Gly
115 120 125

Leu Leu Lys Ala Ala Gln Pro Thr Ala Thr Ile His His Met Asp Ala
130 135 140

Gln Arg Met Pro Pro Asn Thr Ala Val Tyr Pro Pro Ser Leu Gly Ser
145 150 155 160

Ser Phe Val Tyr Gln Ser Met Ser Pro Pro Thr Ser Pro Val Glu Ser
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Ala Asn Gln Asn Val Asn Val Met Gln Pro Val Ala Ala Thr Pro Ala
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Pro Ala Ser Ala Pro Leu Pro Gln Gln Ser Tyr Pro Gln Pro Phe Ile
195 200 205

Thr Tyr Asn Ser Lys Ala Gly Met Thr Ser Asp Glu Ala Met Tyr Leu
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Leu Leu Gln Pro Thr Val Ala Ser Pro Thr Pro Ser Pro Pro Val Ala
225 230 235 240

Pro Pro Pro Thr Ser Thr Gly Ser Arg Ala Ser Lys Val Arg Val Ala

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Gly Phe Ala Val Trp Gln Gln Ser Ser Trp Ile Trp Leu Leu Asn Phe
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Thr Leu Met Leu Gly Cys Leu Val Lys Leu Leu Val Tyr Gly Asp Pro
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Gln Leu Asp Ala Gln Thr Asp Ala Tyr Cys Gln His Arg Gln Arg Ala
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Leu Asn Cys Leu His Met Phe Gly Leu Ser Leu Pro Ala Ser Arg Leu
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Glu Cys Tyr Leu Gln Thr Thr Trp Gln Phe Leu Arg Phe Leu Phe His
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Arg Leu Trp Leu Gly Arg Val Leu Ser Arg Arg Ser Gly Gly Leu Phe
 595 600 605

Ser Asn Ala Ala Ser Arg Lys Gln Ala Leu Ala Ser Ala Arg Glu Leu
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Ser Arg Gly Asp Met Asn Gly Ile Met Met Ala Leu Phe Ala Ser Asn
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Met Ala Glu Val Ala His Asn Leu Leu Thr Pro Arg Glu Thr Ile Cys
 660 665 670

Ile His Val Met Thr Ala Leu Arg Met Lys Arg Ser Ala Pro Lys Trp
 675 680 685

Leu Gln Gln Phe Phe Ala Arg Tyr Tyr Met Ser Arg Ala Arg Gln Glu
 690 695 700

Cys Gly Arg Thr Arg Ala Thr Glu Gln Thr Gln Glu Leu Arg Trp Ala
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Phe Thr Ala Tyr Gly Tyr Arg Tyr Cys Ala Thr His Val Phe Thr Tyr
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Asp Leu Ser Asp Ser Gly Glu Gln Asp Gly Phe Phe Thr Arg Leu Arg
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Asn Pro Cys Asp Pro Ala Ala His Val Ile Lys Gln Tyr Arg Glu His
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Leu Leu Phe Lys Ser Ile Gln Cys Leu Val Gly Ala Gly His Lys Ser
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Gly Gly Leu Pro Thr Ser Ser Val Ser Gly Glu Ala Glu Gln Leu Gln
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Gln Gln Gln His Ser Gly Thr Ile Val Ser Asn Val Leu Lys Tyr Thr
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Ser Leu Leu Lys Asp Thr Leu Trp Ala Asp Glu Asp Glu Arg Asp Thr
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Asn Val Val Trp Trp Ala Asp Val Leu Glu Thr Ala Val His Trp Leu
835 840 845

Leu Gly Glu Asp Thr Leu Ala Glu Gln Leu Tyr Gly Arg Ile Lys Gln
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Met Pro Thr Gln Leu Gln Gln Cys Gly Glu Asn Asp His Leu Pro Lys
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Ala Leu His Ala Val Leu Arg Ala Lys Met Ile Leu Leu Lys Asn Asn
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Trp Ser Glu His Leu His Val Asn Asp Lys Ile Ala Pro Phe Trp Ile
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Arg Leu Gly Leu Glu Glu Lys Arg Lys Phe Ala Glu Ile Leu Leu Tyr
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